

23 April 2024

#### **ASX ANNOUNCEMENT**

# KEY TARGET GENERATION ADVANCING AT MIRIAM LITHIUM PROJECT

### **Highlights**

- The Miriam Project hosts high-grade spodumene bearing pegmatites with rock chip samples up to 1.85% Li<sub>2</sub>O<sup>1</sup>, located immediately north of FBM's Big Red discovery.
- Geochemical soil sampling previously undertaken by Corazon Mining Limited (ASX:CZN) (Corazon) revealed a primary target of approximately 1.6km in strike, with a second trend spanning approximately 600m.
- Field mapping undertaken by FBM in recent weeks has <u>successfully identified 11 discrete</u> <u>outcropping pegmatite units</u> across the southern area of the Miriam Project tenure.
- Additional sampling of the known spodumene-bearing outcrop previously identified by Corazon has generated a further 2.0% Li<sub>2</sub>O rock chip assay.
- Significantly, <u>FBM identified an additional spodumene-bearing outcrop</u>, approx. 250m west of the known spodumene-bearing outcrop, which returned a rock chip assay of 1.23% Li<sub>2</sub>O.
- The rock chip and soil sampling geochemical data, plus recent mapping results, have identified four (4) distinct target zones, varying from 350m to 1.6km in strike length.
- Wide-spaced extensional soil sampling is now planned to test the potential for blind, subsurface pegmatites, including across the northern part of the tenure.
- Target-generative geophysical review has also commenced, including litho-magnetic structural interpretation and low-cost ground gravity and passive seismic surveys.
- Acquisition of the Miriam Project remains subject to conditions precedent and is anticipated to complete in late May 2024, with FBM's shareholder meeting scheduled for 20 May 2024.
- Following transaction completion, FBM expects to commence a maiden drilling program at the Miriam Project during Q3 2024.
- Kangaroo Hills Lithium Project (KHLP) initial Phase 4 drill program complete, with assays expected mid-May.

Future Battery Minerals Limited (**ASX: FBM**) (**FBM** or the **Company**) refers to its ASX announcement dated 25 March 2024 in respect to the acquisition of 85% of the issued capital of Coolgardie Nickel Pty Ltd, which holds the tenements that comprise the Miriam Lithium Project (**Miriam Project** or **Project**) in Western Australia and provides an update on the on-going exploration activities at the Miriam Project.

#### FBM Managing Director and CEO, Nick Rathjen, commented:

"These field work results demonstrate why we were attracted to the Miriam tenure in the first place. The powerful combination of multiple pegmatite outcrops with proven spodumene mineralisation and surface soil anomalies suggesting potential for extended blind, sub-surface spodumene-bearing pegmatites, is an exciting

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<sup>&</sup>lt;sup>1</sup> Refer to CZN, ASX Announcement on 17 January 2023 - High Grade Lithium at Miriam Project in Western Australia



one. Our experience and knowledge of the Kangaroo Hills region informs our proposed work program, which is set to rapidly undertake smart, high-value lithium exploration at Miriam. Moreover, the absence of historic drilling for lithium at the Miriam Project provides a significant opportunity for future exploration success."

"We look forward to progressing the Miriam acquisition to completion, targeted for next month, and advancing the tenure towards a maiden target-testing drill program during the September quarter."

#### On-ground activities at Miriam deliver strong target-generative results

#### Strategic acquisition advancing towards completion

In late March 2024, FBM executed a binding purchase agreement to acquire 85% of the issued capital of Coolgardie Nickel Pty Ltd, a wholly owned subsidiary of Corazon, which holds tenements that comprise the Miriam Project (refer FBM ASX release dated 25 March 2024, FBM consolidates strategic position with acquisition of an 85% interest in the Miriam Lithium Project). The transaction remains subject to the satisfaction of certain conditions precedent, including the Company obtaining shareholder approval (scheduled to occur on 20 May 2024), and is anticipated to complete in late May 2024.

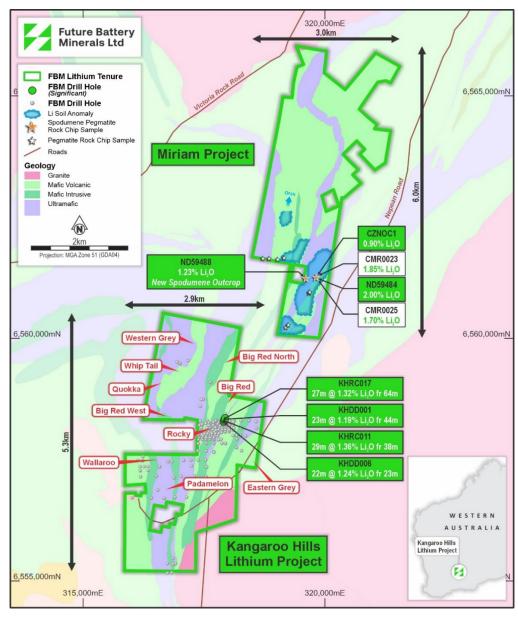


Figure 1: Location of Miriam Project



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The Miriam Project is located approximately 10 kilometres south-southwest of Coolgardie and immediately north and contiguous to the Kangaroo Hills Lithium Project (KHLP).

In December 2022, Corazon announced the discovery of spodumene bearing outcrop on the Miriam Project with high grade rock chip samples returning up to 1.85% Li<sub>2</sub>O<sup>2</sup>. During 2023, detailed geochemical soil sampling revealed a primary lithium target of approximately 1.6 kilometres in strike, and a second trend spanning approximately 600 metres, that links into the main pegmatite trend3. The large lithium soil anomaly, extending from the weathered (depleted) outcrop of spodumene-rich pegmatite, highlights a potential trend of further lithium bearing pegmatites being present undercover on the Miriam Project.

The absence of historic drilling for lithium at the Miriam Project provides a significant opportunity for future discovery. Following transaction completion, FBM expects to commence a maiden lithium drill program at the Miriam Project during Q3 CY24.

#### Mapping work identifies numerous pegmatites and further strong rock chip results

Field mapping work undertaken by FBM in recent weeks has successfully identified 11 discrete pegmatite units across the southern area of Miriam Project tenure. Most of these outcropping pegmatites are located proximate to the known existing spodumene outcrop noted earlier.

The identified pegmatite occurrences are associated with historic gold exploration, namely shafts and trenches, which have limited surface expression. Samples have been collected where safely accessible from the in-situ edges and mullock heaps of the historic workings. However, due to the discrete and disturbed surface expression of the pegmatites, the scale is not readily capable of presentation on geological maps.

Significantly, a pegmatite outcrop discovered approximately 250m to the west of the previously reported spodumene outcrop at Miriam has returned a rock chip assay grading 1.23% Li<sub>2</sub>O.

Additionally, further sampling of the original reported spodumene-bearing outcrop noted above has generated a 2.0% Li<sub>2</sub>O rock chip assay.

Rock chips collected from outcrops in the southern area of the tenure commonly host elevated LCT elements, such as the less mobile pathfinders, tantalum and tin. They also show a highly fractionated trend, with a low K:Rb ratio of less than 20. The fractionation values are similar to LCT mineralisation at the KHLP's Big Red spodumene pegmatite. This highlights the potential for further mineralisation to exist in undercover, unweathered pegmatites at the Project.

Importantly, the returned rock chip assays correlate with the soil sampling previously undertaken by Corazon. Utilising both the rock chip and soil sampling geochemical data, plus the mapping outcomes, four (4) distinct target zones become apparent.

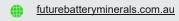
These target zones vary from 350m to 1.6km in strike length, and are characterised by elevated lithium, tantalum and tin values. Including a lower-level lithium anomaly observed developing at the north-eastern boundary of the tenement and which remains open due to the limited footprint of the current soil sample area.

<sup>&</sup>lt;sup>3</sup> Refer to CZN, ASX Announcement on 29 March 2023 – Corazon Expands Lithium Footprint at Miriam Project in Western Australia













<sup>&</sup>lt;sup>2</sup> Refer to CZN, ASX Announcement on 17 January 2023 – *High Grade Lithium at Miriam Project in Western Australia* 



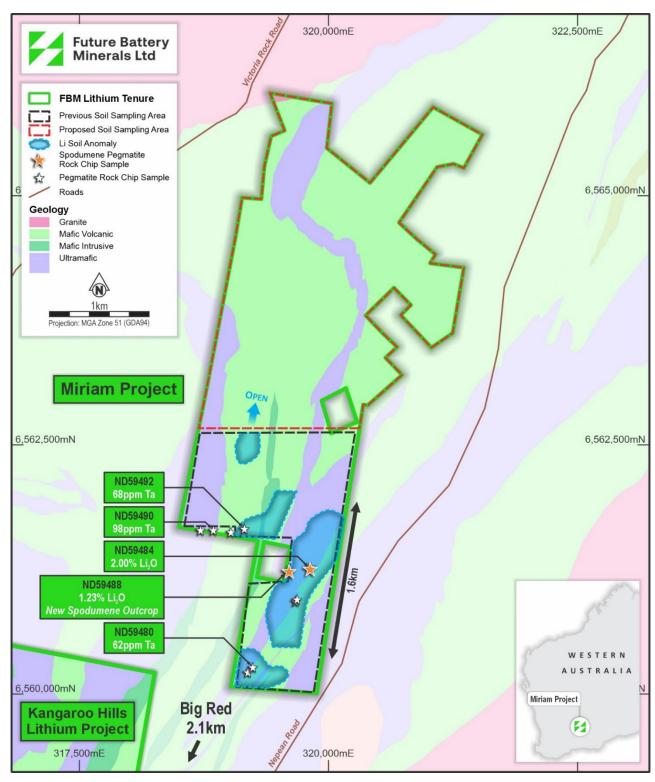


Figure 2: Location of identified pegmatite rock chip samples from FBM's recent field mapping activities

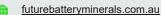






Table 1: Rock chip sample assays

Sample ID	Northing	Easting	Li20%	Ta ppm	Cs ppm	Sn ppm	K:Rb
ND59479	6560212	319190	0.01	29	5.6	19	16
ND59480	6560263	319242	0.00	61.7	3.8	6	28
ND59481	6561252	319817	0.04	82.7	45.3	33	11
ND59482	6561252	319817	0.05	112.5	37.1	31	10
ND59483	6561252	319817	0.04	62.7	56.5	41	10
ND59484	6561252	319817	2.04	709	122	124	4
ND59485	6561268	319825	0.05	70.9	78.5	34	6
ND59486	6560943	319686	0.02	10.4	114.5	13	12
ND59487	6560923	319671	0.01	2.2	104	5	13
ND59488	6561230	319604	1.23	81.7	255	49	5
ND59489	6561628	318718	0.08	34.9	134	28	15
ND59490	6561637	318845	0.01	97.8	2.4	6	20
ND59491	6561619	319020	0.04	29.6	46.8	16	13
ND59492	6561652	319157	0.02	67.7	39.5	11	11

#### Additional target generation work commenced

To complement the existing targets defined at the Project to date. FBM has commenced a target-generative geophysical review of the Miriam tenure. This comprises litho-magnetic structural interpretation of the entire tenement package and low-cost non-ground disturbing geophysical surveys including ground gravity and passive seismic.

These low-cost geophysical review and survey methods were previously successfully implemented at the KHLP. Significantly, the litho-magnetic structural interpretation successfully identified thick blind pegmatites up to 56m and 43m downhole at the Wallaroo and Pademelon targets, respectively.

Soil sampling activities undertaken to date at Miriam have been limited to only 2.6km (north-south) of the Mirian Project's approximate 6km extent. A wide-spaced extensional soil sampling programme is planned to test for potential blind, subsurface pegmatites, including in the northern area of the tenure.

Soil sampling is considered a low cost and fast method of defining broad geochemical anomalies for immediate drill testing or further target refinement. Soil sampling is particularly effective in terrains such as the KHLP and Miriam Project where there is substantial in-situ regolith and little-to-no transported alluvium, producing a more dependable surface geochemical data set. The results of the soil sampling will be used to guide the geophysical surveys allowing for better allocation of survey costs and target refinement.

Mapping work is also planned to be undertaken to evaluate for further potential pegmatites in the northern region of the Project.



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#### Kangaroo Hills Phase 4A drill program

On 11 March 2024, FBM announced that it had commenced the Phase 4A Reverse Circulation (RC) drilling program in the northern area of KHLP. The program was initially focused on testing the interpreted northern continuity (Big Red Extension) of the shallow, thick, gently dipping, and high-grade lithium mineralisation intersected at Big Red. Drilling then shifted to testing of resistivity anomaly targets at Quokka, Big Red West and Western Grey.

This program has now been completed, with assays expected to be returned around mid-May.

This announcement has been authorised for release by the Board of Directors of the Company.

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For further information visit www.futurebatteryminerals.com or contact:

Nicholas Rathjen **Managing Director** E: nrathjen@futurebatteryminerals.com.au Robin Cox **Technical Director** 

E: rcox@futurebatteryminerals.com.au

#### **Competent Persons Statement**

The information in this announcement that relates to exploration results is based on and fairly represents information compiled by Mr Robin Cox BSc (E.Geol), a Competent Person, who is a Member of the Australian Institute of Mining and Metallurgy. Mr Cox is the Company's Chief Geologist and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results. Mineral Resources and Ore Reserves. Mr Cox consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.

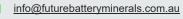
#### **Forward-Looking Statements**

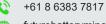
This document may include forward-looking statements. Forward-looking statements include, but are not limited to, statements concerning Future Battery Minerals Limited's planned exploration program and other statements that are not historical facts. When used in this document, the words such as "could," "plan," "estimate," "expect," "intend," "may", "potential", "should," and similar expressions are forward-looking statements. Although Future Battery Minerals Limited believes that its expectations reflected in these forward-looking statements are reasonable, such statements involve risks and uncertainties and no assurance can be given that actual results will be consistent with these forward-looking statements.

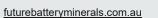
#### **Previously Reported Results**

The information in this announcement that relates to Exploration Results is extracted from the ASX announcements (Original Announcements), as referenced, which are available at www.futurebatteryminerals.com.au. FBM confirms that it is not aware of any new information or data that materially affects the information included in the Original Announcements and, that all material assumptions and technical parameters underpinning the estimates in the Original Announcements continue to apply and have not materially changed. FBM confirms that the form and context in which the Competent Persons' findings are presented have not been materially modified from the original announcement.















# **JORC Code, 2012 Edition, Table 1**

## **Section 1: Sampling Techniques and Data**

CRITERIA	EXPLANATION	COMMENTARY
Sampling techniques	<ul> <li>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1m samples from which 3kg was pulverised to produce a 30g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>FBM - Rock Chip samples are collected from out crop, sub crop and mullock piles in the field.</li> <li>Spodumene observations were determined by competent geologists and examined with ultraviolet light for mineral fluorescence and identification</li> <li>Only geochemical assay results are considered a definitive indication of grade</li> <li>Corazon Rock and Soil Sampling –</li> <li>A total of 636 soil samples were collected</li> <li>Soil sampling was conducted on a 100mx40m grid</li> <li>Results of the Corazon soil programme were announced by Corazon Mining on 29th of March 2023</li> <li>Results of the Corazon rock chips were announced on the 17th of January 2023</li> </ul>
Drilling techniques	Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face- sampling bit or other type, whether core is oriented and if so, by what method, etc).	No Drilling results reported
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	No Drilling reported
Logging	<ul> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> </ul>	<ul> <li>FBM:</li> <li>Rock chips are lithologically logged by Geologists in the field</li> <li>Logging is qualitative, recording rock type and mineral species.</li> </ul>

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CRITERIA	EXPLANATION	COMMENTARY		
	The total length and percentage of the relevant intersections logged.			
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	FBM:  • Whole rock samples were submitted to the laboratory for analysis		
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</li> </ul>	<ul> <li>Rock Chip samples for Lithium Investigation have been fused with Na2O2 and digested in hydrochloric acid, the solution is analysed by ICP by ALS Minerals Laboratories ME-MS81 ICP-AES, ME-MS91. The method is considered a whole rock analysis.</li> <li>A stoichiometric conversion of Li to Li<sub>2</sub>O is applied consisting of a factor 2.153.</li> <li>Ultra Violet Light</li> <li>Ultra violet light of 365nm wavelength was utlised in determination of Spodumene mineral identification Spodumene minerals have a positive UV response and this method is utilised as</li> </ul>		
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	No third-party verification has been completed to date     During project due diligence, FBM technical personnel investigated Spodumene occurrences reported by Corazon Mining     The results of FBM rock chip assays taken from the same outcrop are supportive of Corazon Mining's reported results.		
Location of data points	Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.	FBM:  Rock Chips were recorded in GDA94/MGA Zone 51 datum by handheld GPS +-5m accuracy		

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CRITERIA	EXPLANATION	COMMENTARY
Data spacing and distribution  Orientation of data in relation to geological structure	<ul> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	FBM:  Rock chip sampling is selective from exposed outcrop, results are not indicative or relevant to mineral resource estimation  Corazon Mining's soil sampling grid of 100mx40m is considered relevant for identifying surface geochemical anomalies  FBM:  No orientation-based sampling has been conducted
Sample security	The measures taken to ensure sample security.	FBM:  samples are collected in labelled calico bags  Samples are transported within 1-2days of hole completion by field staff directly to ALS laboratories.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No independent audit or review has been undertaken.

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ection 2: Reporting of Exploration Results			
CRITERIA	EXPLANATION	COMMENTARY	
Mineral tenement and land tenure status	<ul> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul> <li>The Miriam Project consists of 5 prospecting leases.</li> <li>Granted leases are P15/6136, P15/6137, P156138 andP15/6139. P15/6135 remains in application</li> <li>Leases P15/6136-6139 are held by Coolgardie Nickel Pty Ltd,now a 100% subsidiary of Future Battery Minerals Ltd. P15/6135 is held by Limelight Industries Pty Ltd until time of grant</li> <li>A 2% NSR is held by Limelight Industries Pty Ltd over all Miriam tenure.</li> <li>The tenements are located in the Kangaroo Hills Timber Reserve, an approved Conservation Management Plan provides conditional access to the tenure.</li> <li>The tenements are in good standing and no known impediments exist.</li> </ul>	
Exploration done by other parties	<ul> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul> <li>Soil and Rock chip sampling have been conducted by Corazon Mining, FBM has reviewed the results and sample procedures which are inline with current</li> </ul>	













CRITERIA	EXPLANATION	COMMENTARY
		industry standards
Geology	Deposit type, geological setting and style of mineralisation.	The Miriam Project is prospective for Lithium Caesium Tantalum (LCT) enriched pegmatites which intrudes older Archean aged greenstone lithologies.
Drill hole Information	A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:  easting and northing of the drill hole collar  elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar  dip and azimuth of the hole  down hole length and interception depth  hole length.  If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	No drill holes are reported.      Results are point samples only.
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul> <li>Results are point samples only</li> <li>Grades &gt;0.3% Li2O are considered significant for mineralisation purposes.</li> <li>Metal equivalent values have not been used.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</li> </ul>	The widths and geometry of lithium mineralised pegmatite is not currently known. Exploration drilling is required to quantify this.
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	Relevant diagrams have been included within the announcement.

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CRITERIA	EXPLANATION	COMMENTARY
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	<ul> <li>All relevant results have been previously reported in cross referenced announcements.</li> <li>All rock chip assays from FBM sampling has been included. Corazon sampling has been included and referenced.</li> </ul>
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	No other substantive data exists.
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>FBM plans to conduct further target generative exploration at completion of transaction, this will include, mapping, sampling, geophysical surveys. Drilling will be conducted on a campaign basis testing identified targets.</li> <li>Refer to figures/diagrams in the main body of text.</li> </ul>





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